2015
Marks Our 30th Year at Airventure

ENGINEERING®
INCORPORATED

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Aircraft Audio Control Systems

ENGINEERING®
INCORPORATED
Sound Quality. Sound Engineering.

PMA450

PAR200A

PM3000

Flying Never Sounded So Good®

Flying Never Sounded So Good®

Our sole mission is to invent better ways for pilots to communicate. It's no wonder why PS Engineering has brought more audio control innovations to GA than any other company…period.

In 1985, two electrical engineers, one a Pilot the other a circuit designer, found themselves wondering when the revolution would come to the field of audio control. At the time, aircraft intercoms and audio panels had seen virtually no improvement in over a decade. With new digital circuitry and technologies, they believed it was time for the revolution to begin.

Cessna 421

Because of our many years of experience in designing and manufacturing audio control systems, many other avionics manufacturers have relied on PS Engineering to design and build their audio panels to complete their avionics suite. Considering the entire fleet of private aircraft (GA, LSA, Experimental) it's wouldn't be surprising to think that more than half of those airplanes have one type or another of a PS Engineering manufactured product.

If these two guys hadn't founded PS Engineering, the community of pilots would probably still be waiting for the revolution to begin.

PS Engineering has been the source for virtually every major cockpit audio innovation in the field of audio panels:

- First to provide BlueTooth® integration
- First to implement the USAF patented technology Patent no. 7,391,877
- First to provide true hands-free VOX system, the IntelliVox® Patent no. 6,493,450
- First to provide individually adjustable VOX circuitry
- First to use digital signal processing to record aircraft radio for playback in the cockpit, known as the IRS
- First to provide an integrated aural warning system into an audio panel
- First to provide Swap capability, Patent no. 5,903,227; 6,160,496
- First to fully integrate music with Soft Mute technology, allowing flexible music control. Patent no. 4,941,187
- First to introduce an FAA approved stereo audio panel with intercom and marker beacons, all in the same unit
- First to introduce AMP™, (Active Microphone Processor) a system that removes noise from the microphone.

RV-10

King Air

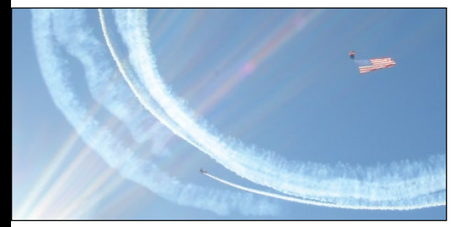
Using the latest technologies and the highest level of quality control, PS Engineering manufactures all of its products in the United States, to the most exacting standards. MADE IN THE USA means something to us.

What sets PS Engineering apart from our competition is that we listen.

Good ideas and PS Engineering go hand in hand. We travel around the country, to air shows and avionics shops, asking questions on how we can improve our systems. We aim to be the most approachable, most responsive avionics manufacturer in the world.

When you see innovation in audio, chances are, it is from PS Engineering.

AUDIO PANELS



PAR200A
PMA450
PMA4000
PMA6000B
PMA7000 Series
PMA8000 Series
PAC24
PDA360EX
PMA5000EX

Why so many audio panels?

The reason we designed all these audio panels wasn't to confuse our customers; but rather to provide solutions to match our customers' needs. We recognized early on that one size does not fit all.

Certified

PAR200A – World's first audio selector panel that functions as a hi-fi stereo intercom with Bluetooth® and controls a remote mounted Com radio.

PMA450 – A slide-in replacement for the GARMIN* GMA340 and the PMA8000 series, this Digital Audio Selector Panel provides IntelliAudio® Dimensional Sound, 6-place IntelliVox® and hi-fi stereo with Bluetooth® interface.

PMA4000 – A small form-factor was the design goal for this little jewel. Capable of being panel mounted like an intercom or in a 2¼" round instrument hole, the PMA4000 also provides a four-place mono intercom with IntelliVox® and speaker amplifier.

PMA6000B – Low cost solution. This is the only audio panel we know that includes an intercom and a marker beacon receiver selling for less than $1095.

PMA7000 Series – Pin-compatible to the KMA24, these audio panels incorporate IntelliVox® and enhanced capabilities such as full duplex wireless telephone, and audiophile stereo music inputs. Three systems to choose from.

PMA8000 Series – Designed as plug-and-play with the GARMIN* GMA340, this audio panel includes a complete feature set with digital recorder, front panel configuration control, and monitor mode.

PAC24 – This specialty audio panel is suitable for special mission use, such as police/rescue/fire patrol, and includes provisions for observer position. Single and dual systems available.

Experimental

PDA360EX – The fundamental advantage of the PDA360EX over conventional audio panels for the homebuilt aircraft is that is uses the same technology as its big brother, the PMA450.

PMA5000EX – This "Experimental Only" audio panel has the capabilities homebuilders demand as well as some new innovations. Price/Performance was the goal and this panel delivers in both sectors. The PMA5000EX will find itself operating comfortably from Light Sport Aircraft to RVs.

IntelliVox®

PS Engineering's revolutionary IntelliVox® intercom squelch protocol harnesses the computational power of microprocessors, and eliminates complicated squelch adjustments. In addition, by using independent, automatic microphone squelch circuits, extraneous cabin noise is minimized. IntelliVox® means that the system will always be optimized, tailoring itself for different microphones, as well as variations in voice and sound levels in the cockpit. With IntelliVox® you'll have seamless and clear communications.

IntelliAudio®

Using patented technology licensed from the Air Force Research Laboratory at Wright Patterson AFB, IntelliAudio® places multiple audio sources in positions within stereo headsets. These dimensional sound locations allow the Pilot to more easily focus on a particular radio conversation of interest.

ProSupport™

All of our audio panels include PS Engineering's ProSupport Warranty. Depending upon the audio panel installed, the unit will come with either a 1, 2, or 3 year guarantee that if the unit was installed by an authorized PS Engineering Dealer or a custom wire harness was purchased from PS Engineering, a warranty exchange unit will be shipped the same day of the issuance of an RMA.

*GARMIN GMA240 and GMA340 are trademarks of Garmin International, Inc. PSEngineering, Inc. is not associated or affiliated with Garmin International, Inc. in any way.

PAR200A

Bluetooth™

Remote Mounted Radio

TECHNICAL SPECIFICATIONS

PAR200A Audio Panel and Radio - FAA - TSO

Audio Selector/Intercom	FAA TSO-C139
Communications Transceiver	FAA TSO-C169a (PARTIAL)
Environmental Qualification DO-160G	A1C1BAESRXXXXXXZ B(XX) ABATTBXXA2E2 XXX
Operating Temperature Range:	-20° C to 55°C , short term -40°C to +70°C
Altitude:	35,000 feet
PAR200A Unit Weight	1.1 lb. (0.49 kg)
Rack with connectors	0.51 lb. (0.24 kg)
Voltage:	11-33 VDC
Maximum Current:	2.5 Amp (Externally protected by a 3A pull-type breaker)

AUDIO SELECTOR SPECIFICATIONS

Audio selector panel input impedance:	510 Ω
Input Isolation:	-60 dB (min.)
Receiver Inputs:	4 (Com 1, Com 2, Nav 1, Nav 2)
Unswitched Inputs:	4
Transmitter Selections:	3 (Com 1, Com 2, Com 1/2)
Headphone Impedance:	150 – 1000 Ω
Headphone Output:	30 mW each headset, no clipping <1% THD typical into 150 Ω)
Speaker Output (into 4 Ω) with no clipping	
14 VDC: 3 Watts (min.) **28 VDC:** 10 Watts (min.)	
Microphone Impedance:	150 - 600 Ω
Intercom Positions:	4-place IntelliVox® ICS
Music Inputs:	2 (Independent, Stereo)
Distortion:	<1% THD @ 30 mW into 150Ω
Mic Freq. Response, 3 dB:	300 Hz - 6000 Hz
Music Freq. Response, 3 dB:	20 Hz - 20 KHz

COM RADIO TRIG TY91

Channels (Transmit & receive)	760 channels, 25 KHz spacing
	2280 channels, 8.33 KHz spacing
	118.000 – 136.992 MHz
Power consumption Receive (no signal)	2.8W @ 14VDC
Transmit	3.2A
Input Voltage	11-33 VDC 5A Circuit Breaker.
Power output	6 watts (nominal) VSWR Tolerance < 2:1 for best operation (5:1 without damage)
Receiver sensitivity	-6dB SINAD @ 5µV (1KHz audio with 70% modulation)
Temperature range	-20 to +70 degrees Celsius
Dimensions	W-2.5" x H-1.9" x D6.3" (plus 1.5" for harness) W-66mm H-48mm x D-160 (plus 35mm for harness)
Weight	0.77 lbs (0.350 k)
FCC ID:	VZI00882

The PAR200A is an FAA Approved system that combines an audio control panel, 4-place stereo IntelliVox® intercom with Bluetooth®, and a remote mounted, 760-channel VHF aviation communications transceiver.

This system saves cockpit space, weight, and money over stand-alone independent systems while providing the most sought after functionality.

The PAR200A is attractive for the aircraft that is used primarily for VFR missions or as an audio panel/back-up com to more advanced systems. The elimination of one panel mounted radio saves valuable panel space.

Seamless integration between the audio panel and the radio was the goal for the best user experience possible, while keeping the system costs to a minimum.

The right half of the PAR200A is dedicated to the communication radio, with an easy to read LCD display that shows the frequencies, which are controlled through a concentric knob. This radio has active and standby frequencies, and a standby frequency monitor mode that permits listening to both active and standby frequencies.

The Pilot can store up to 5 frequencies in non-volatile memory so he can easily tune to his frequently used channels. The radio also has autosquelch, so you will always have optimal radio sensitivity.

The left half controls the audio panel for radio selection, intercom and music volume, intercom modes, and multiple music mute mode control. The PAR200A has two independent music inputs. Independent power supplies assure operation in failsafe on the audio panel; the VHF radio can still be used.

The PAR200A can be configured as stand alone, as COM 1, or as COM 2. This provides flexibility to allow the aircraft owner to decide if a second radio will be used and in what position. The PAR200A includes a cockpit speaker amplifier for additional flexibility.

An integrated Bluetooth® system allows the PAR200A to interface with cellular telephones, giving the aircraft occupants ready access to their telephones. In addition, the Bluetooth® will stream music from compatible devices like iPads, and smart phones.

WARRANTY

2-year Pro-Support exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any report. See Warranty information in the Installation Manual.

ORDERING INFORMATION	PART NO.
PAR200A Audio Panel, Stereo Intercom, Com Radio	050-228-0200

Warranty: 2-Year Pro Support Exchange Program, when installed by an authorized PS Engineering Dealer.

PMA450

The Aviation Consumer
September 2014 "Impresses"

Bluetooth™

The PMA450 begins our journey into the digital-audio domain. Our company is known as the source of the vast majority of innovations in audio control systems for General Aviation and the PMA450 opens up completely new dimensions for audio panels with valuable features and an intuitive interface.

Although the PMA450 has a superset of the capabilities of the PMA8000BT, Pilot's access to new advanced features is significantly more intuitive. Pilots who currently are flying with the PMA8000BT will have all of the advantages of their current system along with all of the new capabilities of the PMA450.

IntelliAudio® is a patented technology that we have licensed from the United States Air Force. Originally designed for fighter pilots who are inundated with multiple types of audio signals, the PMA450 now brings this technology to GA Pilots.

For instance, when wearing stereo headsets, Com 1 will appear to come from the Pilot's 10 o'clock position while Com 2 will appear to come from the 2 o'clock position. Because the method used to create this audio environment not only makes it possible for the Pilot to hear both radios at the same time, it allows the brain to more easily discern one com from the other. With IntelliAudio®'s digital audio processing, the radio and intercom audio is incredibly clean, clear and crisp.

Our highly acclaimed patented automatic VOX (IntelliVox®) is also an integral part of the intercom system of the PMA450, completely eliminating manual intercom squelch adjustments.

Through the use of 3 soft-keys and a graphic display, the Pilot visualizes the set up of the audio panel. This makes making changes to the audio configuration simple. This approach means a Pilot guide is almost unnecessary.

In addition to Nav 1 and 2 switched inputs, there are three Pilot definable switched inputs that can be named to reflect actual equipment in the aircraft.

Finally, there is no requirement for an avionics shop to connect a computer for initialization of the audio panel. All audio panel adjustments can be done using front panel controls, eliminating the need to connect to an external computer.

*GARMIN and GMA340 are trademarks of Garmin International, Inc. PS Engineering, Inc. is not associated or affiliated with Garmin International, Inc. in any way.

WARRANTY

2-year Pro-Support exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any report. See Warranty information in the Installation Manual.

ORDERING INFORMATION	PART NO.
PMA450 Audio Panel with IntelliAudio®, 6-Place IntelliVox® stereo intercom, Bluetooth® and Marker Beacon	050-450-0100
PMA450 (same as above but without Marker Beacon Receiver)	050-450-0200

CHECKLIST OF FEATURES:

- Com 1, Com 2, Nav 1, Nav 2 capability
- IntelliAudio® provides dimensional sound for easy discernment of simultaneous radio sources
- Optional Marker Beacon Receiver
- Volume Light Bar Indicate Various Volume Levels
- 3 Customizable Switched inputs. Pilot creates custom labels to fit specific aircraft equipment list.
- 6-place hi-fi stereo intercom with limitless distribution capability and 3 music mute modes.
- USB charger for portable devices including iPhones® or iPads®.
- Adjustable Volume levels for Speaker, Music 1, 2, and Bluetooth inputs, and 2 of the 4 unswitched inputs and the optional Marker Beacon Receiver
- Two hardwired Music inputs as well as Bluetooth® music
- Audiophile intercom, aircraft radio and music fidelity. Extremely quiet digital intercom system.
- No computer programming required, front panel configurable.

TECHNICAL SPECIFICATIONS

Approval Basis		FAA TSO C139a, C35d, C71
Certification Documents		RTCA, Inc. DO-143, DO-160G, DO-214A, DO-178C, DO-254
Intercom		6-place Stereo
Transmitter Selections		4 (Com 1, Com 2, Com 1/2 Split, Bluetooth TEL)
Switched Receiver Inputs		6 (Nav 1, Nav 2, MKR, AUX 1, AUX 2, AUX 3)
Portable Electronic Device Charging Port		+5.0 VDC, 10 Watts from USB connector
Unswitched Inputs		4
Power Requirements		11-33 VDC, 3.5 Amps
Audio Output Power	Speaker:	3 Watts (14V), 10 Watts (28V)
	Headphone:	35mW each headset, no clipping <1% distortion typical
Audio Frequency Response		+/- 3db, 300 Hz to 6000 KHz
Entertainment Frequency Response		+/- 3db, 20 Hz to 16 KHz
Music Inputs		2 (independent and user configurable)
Weight		1.5 lbs (with tray & installation kit)
Dimensions		Height: 1.3 in. (3.3cm)
		Weight: 6.25 in. (16.9cm)
		Depth: 7.15 in. (18.16cm)
Environmental Qualifications		RTCA DO-160G
Temperature Range		Operating -20° – 55°C, Short Term Operating -40° – +70°
Altitude		35,000 feet
Available Marker Receiver		75 MHz, Crystal Controlled, receiver and indicator
External Marker Outputs		Lights and MM sense output

PMA4000

The PMA4000 is an audio panel that provides switching of two Coms and two Navs. It has a 4-place mono IntelliVox® intercom, and can be configured for PTT intercom. Four unswitched inputs are available.

Includes a built-in speaker amplifier. Hear aircraft radio audio through the headsets or over the cabin speaker by a press of a pushbutton.

The PMA4000 has PS Engineering's revolutionary IntelliVox® intercom squelch protocol. A mode switch allows the Pilot to select either ISO or ALL intercom modes.

Shown actual size

Independent intercom volume controls for the Pilot and the Copilot. Because this system was designed with the tandem cockpit in mind, the Copilot volume can be mounted in another location. The volume controls only the intercom, the radio volume is adjusted by the radio controls.

The PMA4000 provides a monaural entertainment input. With our SoftMute™, the music mutes, allowing undistracted communications.

TECHNICAL SPECIFICATIONS	
Approval Basis	FAA-TSO C50c (11942)
Input power	12-28 Volts Current Drain: < 250 mA
Headphone Impedance	150-1000 Typical
Audio Distortion	<1% THD @ 38 mW into 150
Speaker Output	3 Watts @ 14 Vdc 10 Watts @ 28 Vdc
Aircraft Radio Impedance	510
±3 dB Music Freq. Response	200 Hz-18 Khz

ORDERING INFORMATION	PART NO.
PMA4000 4-Place Intercom ..... Audio panel with 4-place intercom with Isolate and ALL modes, single music input, FAA-TSO Weight: 15 ounces Dimensions: 1.70" H X 2.43" W X 6.50" D	11942
2¼" round mounting plate ..... Allows installation in a standard 2¼-inch instrument hole.	575-004-0001

Warranty: 1-Year Pro Support Exchange Program, when installed by an authorized PS Engineering Dealer

PMA6000B

The PMA6000B has been given the benefit of PS Engineering's years of audio panel control design and manufacturing experience. It offers a low cost alternative to the more capable audio panel product line that the industry has come to expect from such a focused and driven company.

This audio selector panel has our original "Set it and Forget it" manually adjusted VOX intercom and a slew of features to enhance versatility and utility.

Swap function allows selection of Com 1 or Com 2 from remote pushbutton. Fail-safe feature automatically hard-wires the Pilot to Com 1 in the case of an outage Uses a single 44-pin connector making installation easier.

The PMA6000B holds FAA TSO and EASA ETSO and was designed to be made easier to install using a single 44-pin Sub-d connector.

TECHNICAL SPECIFICATIONS	
Approval Basis	FAA-TSO C50c, C35d EASA ETSO C50c, C35d
Certification Documents	RTCA DO-160B, DO-178B, DO-143
Intercom	4-place Mono
Transceivers	2 (Com 1, Com 2)
Receiver Inputs	6 (Nav 1, Nav 2, ADF, DME, AUX, MKR)
Marker Beacon	Internal (optional)
Unswitched inputs	2
Power Required	11-33 VDC, 1.5 A
Power consumption	Speaker ON: 600mA OFF: 350 mA
Output power Speaker:	3 W into 4Ω
Headphone:	50 mW into 150Ω, <1% THD
Audio Frequency Response	±3dB, 350Hz-6,000Hz
Entertainment Frequency Response	±3dB, 200Hz-15,000 Hz
Weight	0.8 lb.
Dimensions	6.25" W x 1.3" H x 7.15"
Environmental Conditions	DO-160B A1D1/CAMXXXXXXBBBBAAX
Temperature Range	-20 C to +55 , with brief operation at +70 C
Altitude	50,000 feet, unpressurized
Marker Receiver	75 MHz crystal controlled with external marker lights and MM sense output

ORDERING INFORMATION	PART NO.
PMA6000B Audio Selector w/ 4-place intercom and Marker Beacon	050-604-0300
PMA6000B No Marker Beacon	050-604-0100

Warranty: 1-Year Pro Support Exchange Program, when installed by an authorized PS Engineering Dealer

PMA7000B
PMA7000BT

Bluetooth™

The PMA7000B audio panel lends itself nicely for upgrading an existing Bendix/ King KMA24. While not a plug and play with this KMA24, the PMA7000 series uses the KMA24 connector exactly as it is. This means that none of the wires to the radios are changed. Because the KMA24 does not have a built-in intercom, a second connector is necessary to access the capabilities of intercom, music inputs, and even a telephone interface.

With our legendary 6-place IntelliVox® auto squelch, adjusting the trip level of the individual microphones is a thing of the past. IntelliVox® is designed to keep all microphones off until it recognizes a voice. When is does hear a voice, it instantaneously opens up that mic channel, allowing the intercom channel to be heard. No more clipping or missed syllables, it just works flawlessly.

The PMA7000 series has 3-Com capability. If desired, the Com 3 can be wired as a full duplex telephone interface. With the ability to call ATC while on the ground using the headset, the clarity of these calls are much improved, making the phone a virtual 3rd radio.

Stereo music is the hallmark of the PMA7000 series. With audiophile quality, the Pilot, crew, and passengers can listen to music using our Softmute™. When the radio becomes active, the music will mute, allowing unfettered access to the radio communications. There is the ability to place the music into "Karaoke" mode through the use of the ICS button.

The capability of connection to Bluetooth® enabled devices is now available with the PMA7000BT audio panel. Make phone calls or stream hi-fi stereo music into the audio system wirelessly. All PMA7000 series audio panels, including the original PMA7000MS can be upgraded with the PMA7000BT Plug 'N Play audio panel.

WARRANTY

2-year exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any repair. See Warranty Information in Installation manual for full details.

ORDERING INFORMATION	PART NO.
PMA7000B Audio Selector with 6-place intercom and Marker Beacon	050-781-0203
PMA7000B No Marker Beacon	050-781-0103
PMA7000BT Audio Selector with Bluetooth® and Marker Beacon	050-781-0204

CHECKLIST OF FEATURES:

- IntelliVox® automatic VOX system with individually gated microphones
- 6-Place hi-fi stereo intercom with Soft Mute™
- Two music mute modes: Mute On and Mute Off
- Built-in Marker Beacon Receiver
- Cellular telephone input with dedicated On/Off hook switches for unprecedented flexibility
- Split mode for dual audio panel capability
- Two hi-fidelity stereo music source inputs
- Three Isolation modes - Pilot Isolate, All, and Crew
- Four unswitched inputs
- Selectable music muting for passengers
- Selectable special intercom mode with "Alternate Intercom Mode"
- RAM (Radio Active Mute) eliminates constant back ground noise from unswitched inputs

TECHNICAL SPECIFICATIONS	
Approval Basis	FAA-TSO C35d, C50c EASA ETSO C50c, C35d
Certification Documents	RTCA DO-160C, DO-178B, DO-143, DO-214
Intercom	6-place Stereo
Transceivers	3 - Com 1, Com 2, Com 3 (or Tel Duplex)
Receiver Inputs	5 - Nav 1, Nav 2, ADF, AUX, DME
Marker Beacon	Internal
Unswitched inputs	4
Power Required	11-33 VDC, 1.5 A
Power consumption	Speaker on, 600mA typical. 1A peak Speaker off, 350 mA
Output power	
Speaker:	3 W into 4W (14V) 10W into 4W (28V)
Headphone:	50 mW into 150Ω w/o clipping 38 mW into 150Ω, <1% distortion
Audio Frequency Response	±3dB, 300Hz-6,000Hz
Entertainment Frequency Response	±3dB, 20Hz-18,000 Hz
Weight	1.5 lb.
Dimensions	6.25" W x 1.3" H x 6.8" deep behind instrument panel
Environmental Conditions	DO-160C A1D1/CA(MN)XXXXXXBBBBTBKXX
Temperature Range	-15 C to +55 , with brief operation at +70 C
Altitude	50,000 feet, unpressurized
Marker Receiver	75 MHz crystal controlled receiver
External Marker	Lights and MM sense output

PMA7000M
PMA7000H

Bluetooth™

PMA6000

If you have this old one...

You can have this new one.

PMA7000M

If you have installed our original mid-1990's PMA6000 series audio panel in your avionics stack, this Plug 'N Play audio panel will provide a tremendous upgrade for those panels without any rewiring at all. The only thing that is required for installation is a 3/32" Allen Wrench.

Having all of the capabilities of the PMA7000BT with the exception that the music is monaural not stereo, this upgrade will provide IntelliAudio®, a significantly improved user interface, and the ability to make phone calls and stream music.

CHECKLIST OF FEATURES:

- IntelliVox® automatic VOX system with individually gated microphones
- 6-Place monaural intercom with Soft Mute™
- Two music mute modes: Mute On and Mute Off
- Improved built-in Marker Beacon Receiver
- Cellular telephone input and music streaming (Bluetooth®)
- Split mode for dual audio panel capability
- Three Isolation modes - Pilot Isolate, All, and Crew
- Four unswitched inputs
- Selectable special intercom mode with "Alternate Intercom Mode"

This expanded version of the PMA7000B includes a 10-place intercom and an optional Cockpit Voice Recorder (CVR) output. For environments where having a Hot Mic is beneficial, the PMA7000H not only has IntelliVox® but also has provisions for Push-To-Talk Intercom. This capability is especially useful when there may be direct wind noise on the microphones or the cockpit din is just too high for any VOX circuit to work. Now available with wireless Bluetooth® capability.

PMA7000H

WARRANTY
2-year exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any repair. See Warranty Information in Installation manual for full details.

TECHNICAL SPECIFICATIONS

Approval Basis	FAA-TSO C35d, C50c EASA ETSO C50c, C35d	**Output power** Speaker: Headphone:	 3 W into 4W (14V) 10W into 4W (28V) 50 mW into 150Ω w/o clipping 38 mW into 150Ω, <1% distortion
Certification Docs	RTCA DO-160C, DO-178B, DO-143, DO-214	**Audio Freq. Response**	±3dB, 300Hz-6,000Hz
Intercom	6-place Stereo	**Music Freq. Response**	±3dB, 20Hz-18,000 Hz
Transceivers	3 - Com 1, Com 2, Com 3 (or Tel Duplex)	**Weight**	1.5 lb.
Receiver Inputs	5 - Nav 1, Nav 2, ADF, AUX, DME	**Dimensions**	6.25" W x 1.3" H x 6.8" D
Marker Beacon	Internal	**Environmental**	DO-160C
Unswitched inputs	4		A1D1/CA(MN)XXXXXXBBBBTBKXX
Power Required	11-33 VDC, 1.5 A	**Temperature Range**	-15 C to +55 , with brief ops at +70 C
Power consumption	Speaker on, 600mA typical. 1A peak Speaker off, 350 mA	**Altitude**	50,000 feet, unpressurized
		Marker Receiver	75 MHz crystal controlled receiver

ORDERING INFORMATION	PART NO.
PMA7000M Mono Audio Selector with 6-place intercom and Marker Beacon	050-781-0604
PMA7000H 10-place hi-fi stereo intercom	050-781-0300
PMA7000H Same as PMA7000H with CVR	050-781-0287
PMA7000H-BT Same as PMA7000H with Bluetooth®	050-781-0404

PMA8000B
PMA8000BT

The Aviation Consumer
June 2011 "Does It All"

Bluetooth™

PMA8000BT

The PMA8000 Series Audio Selector Panel offers the widest range of capabilities based upon one standard configuration. It is the platform for all other models and has the greatest price/performance value when considering an upgrade to your audio panel.

All models of the PMA8000 are Plug 'N Play with the GARMIN GMA340*. This makes upgrading to the more capable PMA8000 Series audio panels simple because it is as easy as sliding out the GMA340 and sliding back in the PMA8000.

The PMA8000BT adds Bluetooth® connectivity. This allows Bluetooth® enabled devices to be wirelessly connected to the audio panel, eliminating the wire clutter usually associated with iPods, telephones, or other devices that are "plugged into" the audio panel.

Both telephone and music streaming are supported, and up to 8 different paired devices can be stored.

The PMA8000B and the PMA8000BT are available in Vertical Mount.

TECHNICAL SPECIFICATIONS

Approval Basis	FAA TSO C35d, C50c EASA ETSO C50c, C35d
Certification Documents	RTCA/DO-214 RTCA/DO-143 RTCA/ DO-160D RTCA/DO-178B DO-254
Intercom	6-place Stereo
Transmitter Selections	4 (Com 1, Com 2, Com 1/2, TEL)
Receiver Inputs	6 (Nav 1, Nav 2, ADF, DME, MKR, AUX)
Marker Beacon	Internal
Unswitched Inputs	5 - including front panel jack
Power Requirements	11 to 33 VDC , 2.5 Amp
Output Power Speaker Output:	3 Watts (14V), 10 Watts (28V.)
Headphones:	38 mW each headset, no clipping <1% distortion typical
Audio Frequency Response	± 3 dB, 300 Hz - 6000 Hz
Entertainment Frequency Response	± 3 dB 20 Hz - 18 kHz
Weight	1.85 lb.
Dimensions	Height: 1.3 in. (3.3 cm) Width: 6.25 in. (16.9 cm) Depth: 7.15 in. (18.16 cm)
Environmental Qualification	RTCA DO-160D, A1D1CABSMXXXXXXZBABATBXXE2XXX
Temperature Range	-15° C to 55°C
Altitude	50,000 feet, unpressurized
Marker Receiver	75 MHz, Crystal Controlled
External Marker Outputs	Lights and MM sense output

CHECKLIST OF FEATURES:

- IntelliVox® automatic VOX system with individually gated microphones
- Split mode for independent transmit capability
- 6-Place hi-fi stereo intercom with Selectable Muting Modes
- Monitor Function which allows automatic muting of the non-primary radio
- 4 - Music Mute mode: Mute On, Mute Off, Radio Mute, Intercom Mute
- Dedicated front panel music volume control
- Built-in Marker Beacon Receiver
- Cellular telephone input with "DuTel™" telephone distribution
- Easy front panel control for telephone sidetone on/off
- Continuous Loop Digital Aircraft Radio Recorder
- Front panel jack for phone, iPod, or unswitched audio warnings
- 2 - Hi-fidelity stereo music inputs (no ground loop noise)
- 3 - Isolation modes - Pilot Isolate, All, and Crew
- 5 - Unswitched inputs, including front panel jack
- Selectable Music Distribution
- Selectable Intercom Mode with special "Alternate Intercom Function"
- RAM (Radio Active Mute) eliminates constant background noise

WARRANTY
3-year Pro-Support exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any repair. See Warranty Information in Installation manual.

*GARMIN and GMA340 are trademarks of Garmin International, Inc. PS Engineering, Inc. is not associated or affiliated with Garmin International, Inc. in any way.

PMA8000B Vertical

ORDERING INFORMATION	PART NO.
PMA8000B Audio Panel, Marker Beacon, stereo intercom	050-890-0202
PMA8000B Vertically Mounted Audio Panel	050-890-0502
PMA8000BT (same as above but with BlueTooth® interface)	050-890-0702
PMA8000BT Vertically Mounted Audio Panel	050-890-0802

PMA8000C
PMA8000E

Bluetooth™

PMA8000C

The PMA8000C provides for an additional communications transceiver. While most aircraft have two Com radios, there are cases where a third transceiver is required. The PMA8000C not only allows the connection of three radios, it also provides 3 unique split transmit modes.

Pilot Com 1 - Copilot Com 2
Pilot Com 1 - Copilot Com 3
Pilot Com 2 - Copilot Com 3

This is particularly helpful when there are special missions required. As an example, Com 3 could be a HF or UHF radio. Unlike the GMA340 where only Pilot Com 1 - Copilot Com 2 is offered, the PMA8000C adds this additional flexibility.

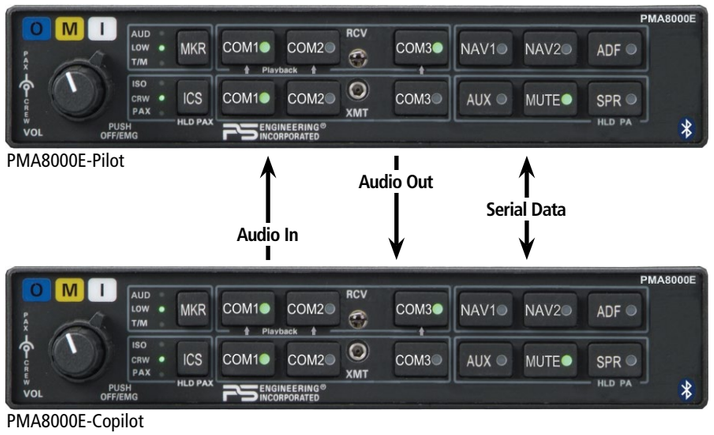
The PMA8000E is a system that consists of two interconnected audio panels. This provides the Pilot and Copilot their own audio selector panel. With the intelligent digital interface control, the Pilot has command of the entire audio panel system yet can easily offload some of the radio work to the Copilot.

Intercom configurations allow the Pilot undisturbed radio communications while permitting the Copilot and passengers to communicate.

"Strange States" are a thing of the past thanks to the PMA8000E's built-in intelligence. This system prevents the Copilot from over-riding the Pilot's audio panel configurations, or interrupting the Pilot's radio communications. Because of this intelligent approach, the Pilot and Copilot will treat their respective audio panels as their very own, never second guessing what configuration the other person has his audio panel in.

Each audio panel is Bluetooth® enabled. They can be used privately be the Pilot or Copilot or shared with each other. The Copilot's Bluetooth interface can also be shared with the passengers.

Through the use of expansion units, it is possible to have up to 12 passengers connected to the system.



TECHNICAL SPECIFICATIONS

Approval Basis	FAA TSO C35d, C50c EASA ETSO C50c, C35d
Certification Documents	RTCA/DO-214 RTCA/DO-143 RTCA/DO-160D RTCA/DO-178B DO-254
Intercom	6-place Stereo (8000E up to 14-place)
Transmitter Selections	3 (Com 1, Com 2, Com 3)
Receiver Inputs	6 (Nav 1, Nav 2, ADF, DME, MKR, AUX)
Marker Beacon	Internal
Unswitched Inputs	5 - including front panel jack
Power Requirements	11 to 33 VDC , 2.5 Amp
Output Power Speaker Output:	3 Watts (14V), 10 Watts (28V.)
Headphones:	38 mW each headset, no clipping <1% distortion typical
Audio Frequency Response	± 3 dB, 300 Hz - 6000 Hz
Entertainment Frequency Response	± 3 dB 20 Hz - 18 kHz
Weight	1.85 lb.
Dimensions	Height: 1.3 in. (3.3 cm) Width: 6.25 in. (16.9 cm) Depth: 7.15 in. (18.16 cm)
Environmental Qualification	RTCA DO-160D, A1D1CABSMXXXXXXZBABATBXXE2XXX
Temperature Range	-15° C to 55°C
Altitude	50,000 feet, unpressurized
Marker Receiver	75 MHz, Crystal Controlled
External Marker Outputs	Lights and MM sense output

WARRANTY

3-year Pro-Support exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any repair. See Warranty Information in Installation manual.

ORDERING INFORMATION — PART NO.

PMA8000C - Audio Panel, Marker Beacon, BlueTooth®, stereo intercom.....050-890-0303
Same as above but with intercom expansion capability.....050-890-0313
PMA8000E - Dual Audio Panel System with Digital Interface.....Call for Part Numbers
6-Channel Expansion Unit - For PMA8000C and PMA8000E only.....11636R

PAC24

The PAC24 was designed as a versatile audio system that meets the needs of airborne law enforcement, EMS, forestry, and special mission aircraft.

Best yet, the recently updated PAC24 is designed to be easily retrofit into the same installation as a King KMA24H (-71). This makes adding modern, flexible, audio control and a high performance intercom easy and cost effective into aircraft with aging audio panels.

The PAC24 contains PS Engineering's legendary IntelliVox® intercom and the headphone amplifier is the most powerful and cleanest in its class, delivering 120mW of punch to overcome the loudest cockpit environments.

The PAC24 has all the features you expect from PS Engineering, like swap™, split mode, duplex mode, and 3-year warranty. Designed from the beginning as a dual-capable system, the PAC24 offers outstanding flexibility for crew member and passenger communications. The dual configuration, the Pilot's audio panel has command of the ships' intercom if necessary, while the Copilot side is able to handle any necessary audio chores.

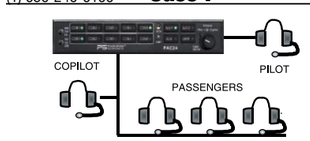
In cases where the crew wants extra control, the PAC24 can be switched to PTT-ICS mode. This prevents the intercom from activating until a dedicated push to talk switch is activated.

COM 5 has special properties in the PAC24. It can be configured as either a conventional Com 5 transceiver, or as a full duplex telephone.

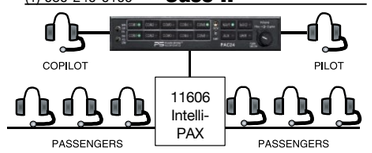
An "Observer" version of the PAC24 is also available. This unit allows radio transmission capabilities for a third person when configured as a special mission dual system.

For non-aviation HF and UHF radios, a tactical radio adapter is required.

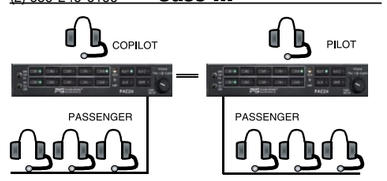
(1) 050-240-0100 **Case I**



(1) 050-240-0100 **Case II**



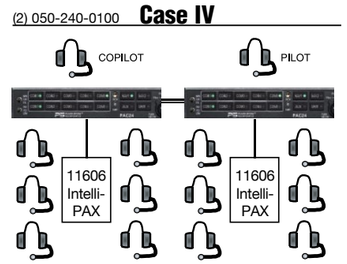
(2) 050-240-0100 **Case III**



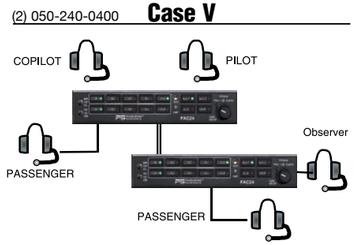
TECHNICAL SPECIFICATIONS

Approval Basis	FAA-TSO C50c EASA ETSO C50c, C35d
Certification Documents	RTCA DO-214 DO-160D, DO-178B
Intercom	5-place
Transceivers	5 (Com 1, 2, 3, 4, 5)
Audio Inputs	4 (Nav 1, Nav 2, ADF, DME)
Unswitched audio inputs	2
Power Required	11-33 VDC, 1.5 A
Power consumption	Speaker on, 600mA typ. 1A peak; Speaker off 350 mA
Output power	Speaker 10 W at 28 Vdc; 3W at 13.8Vdc into 4Ω load
Headphone	50 mW into 150, <1% THD; 120 mW into 150, <10% THD
Audio Frequency Response	±3dB, 350Hz-6,000Hz
Weight	0.8 lb.
Dimensions	6.25" W x 1.3" H x 6.8" deep
Environmental Conditions	DO-160D B1CABGMXXXXXXZBBATMXXE2XXX
Temperature Range	-20 C to +70, with brief operation at +85 C
Altitude	25,000 feet, unpressurized

(2) 050-240-0100 **Case IV**



(2) 050-240-0400 **Case V**



Case	PAC24	Expansion Unit	Pass	Crew Mode
I	Single	No	3	No
II	Single	Yes	6 or 8	Yes
III	Dual	No	6 (3+3)	No
IV	Dual	Yes	14	Yes
V	Observer	No	2	No

ORDERING INFO — PART NO.

PAC24.....050-240-0100
Audio Selector Panel
PAC24 Vertical Version.....050-240-0500
Audio Selector Panel
PAC24 Observer.....050-240-0400
Audio Selector Panel for dual/Observer install
Tactical Radio Adapter..... 12100

PDA360EX

Bluetooth™

For Experimental Aircraft Only

With IntelliAudio® being embraced by pilots who fly certified aircraft, we wanted to make it available to the Homebuilder. Taking some of the PMA450's technology while adding some unique capabilities, we put these functions into a package that best suits the Homebuilder.

Operation is based upon a 3-softkey/graphics display interface that virtually eliminates the need for a Pilot's Guide. It can be configured so the Pilot has direct access allowing customization of the audio panel.

For instance, when wearing stereo headsets, Com 1 will appear to come from the Pilot's 10 o'clock position while Com 2 will appear to come from the 2 o'clock position. Because the method used to create this audio environment not only makes it possible for the Pilot to hear both radios at the same time, it allows the brain to more easily discern one com from the other. With IntelliAudio®'s digital audio processing, the radio and intercom audio is incredibly clean, clear and crisp.

The PDA360EX includes IntelliVox®. It provides both pilots and passengers with automatic intercom squelch control. By consensus of the GA community, IntelliVox® "works like magic" and eliminates the need for any manual adjustments to the intercom squelch.

The PDA360EX provides connection to entertainment and telephone devices. The display provides caller ID. There is front panel volume control of the telephone as well as an adjustment for telephone side tone.

The ability to select how the music is distributed, the volume of the two music sources, as well as individually controlled music muting modes, are examples of the amount of control the Pilot has over his environment.

In addition to Nav 1 and Nav 2 audio capabilities, there are additional inputs. They can be labeled using a unique alphanumeric name. This allows the Pilot to label these switched inputs precisely.

With a built-in 10 Watt-USB charger, it is capable of charging electronic devices, such as tablets, PDAs, iPhones, and iPads. The charger monitors the output and will automatically disconnect a short.

The PDA360EX is Plug 'N Play with the GARMIN®* GMA240™ and the PMA5000EX. Upgrade time is negligible, helping to reduce the cost of upgrading.

*GARMIN and GMA240 are trademarks of Garmin International, Inc. PS Engineering, Inc. is not associated or affiliated with Garmin International, Inc. in any way.

CHECKLIST OF FEATURES:

- Com 1, Com 2, Nav 1, Nav 2 capability
- IntelliAudio® True Dimensional Sound gives Pilots the ability to discern important radio calls
- 4 - Place hi-fi stereo IntelliVox® Intercom with Soft Mute™
- Bluetooth® enabled allows connection of iPhone, iPads and other PDAs for both music streaming and telephone.
- 3-Softkey User Interface with integrated Graphics Display
- Monitor Mode allows automatic muting of non-primary radio
- 3 - music mute modes: Mute On, Mute Off, Radio Mute
- Volume controls for Intercom, 2 of 4 Un-switched Inputs, Telephone, and all Music Inputs
- Cellular telephone input with front panel control of telephone volume and side tone
- Digital aircraft radio recorder (IRS™)
- USB Charging port with Auto-Protect, provides up to 10 Watts of power for iPhones, iPads and other PDA Accessories.
- Split mode for dual audio panel capability
- 2 - Differential, hi-fidelity stereo music source inputs (no ground loop noise)
- 3 - Isolation modes - Pilot Isolate, All, and Crew and "Alternate Intercom Mode"
- Selectable music distribution for Pilot, Copilot and passengers

TECHNICAL SPECIFICATIONS

Approval Basis	None
Intercom	4-place Stereo
Transmitter Selections	4 (Com 1, Com 2, Com 1/2 Split, Bluetooth TEL)
Switched Receiver Inputs	5 (Nav 1, Nav 2, AUX 1, AUX 2, AUX 3)
Portable Electronic Device Charging Port	+5.0 VDC, 10 Watts from USB connector
Unswitched Inputs	4
Power Requirements	11-33 VDC, 3.5 Amps
Audio Output Power	
Headphone:	35mW each headset, <1% THD
Audio Freq. Response	+/- 3db, 300 Hz to 6000 KHz
Entertainment Freq. Response	+/- 3db, 20 Hz to 16 KHz
Music Inputs	2 (independent and user configurable)
Weight	1.5 lbs (with tray & installation kit)
Dimensions	Height: 1.3 in. (3.3cm) Weight: 6.25 in. (16.9cm) Depth: 7.15 in. (18.16cm)
Environmental Qualifications	RTCA DO-160G
Temperature Range	Operating -20° – 55°C, Short Term Operating -40° – +70°
Altitude	35,000 feet

WARRANTY

2-year Pro-Support exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any report. See Warranty information in the Installation Manual.

ORDERING INFORMATION — PART NO.

PDA360EX Audio Panel with IntelliAudio®, 4-Place IntelliVox® stereo intercom and Bluetooth® 050-360-0200

PMA5000EX

For Experimental Aircraft Only

Taking the designs we have created for our certified systems, PS Engineering designed an audio panel with plenty of capability but at an incredibly low price. This panel was designed specifically for experimental and LSA owners.

Without the traditional functions such as Marker Beacon Receiver, Speaker Amplifier, as well as avoiding the costs of certification, the PMA5000EX provides an unprecedented level of price/performance for the homebuilt.

Sporting a four-place IntelliVox® hi-fi stereo intercom, the world-renown automatic VOX makes inter-cockpit communications completely seamless. With two types of music distribution, four kinds of music muting, and with Softmute™ technology, the PMA5000EX provides the flexibility that homebuilders are seeking.

Some experimental aircraft have a significantly higher cabin cockpit din than others, the PMA5000EX IntelliVox® has a configurable "Extreme Noise Capability Mode" making it unlikely that the IntelliVox would trigger prematurely.

The dedicated front panel volume control of music input #1 makes changing the entertainment volume level as easy as pushing up or down on the dedicated music buttons.

The Pilot can select between two music distribution modes. Standard music distribution sends music 1 to the Crew and music 2 Passengers. Alternate which sends music 1 to all headsets in ALL mode and when in Crew mode, music 2 turns on for the passengers.

The PMA5000EX has a new innovation from PS Engineering. Aux 1 and Aux 2 switched inputs can be turned on and off like traditional switched inputs, or with an additional push of the button, the selected audio goes off-line for 60 seconds. This function is useful in cases where the audio is an alert that has been recognized, but becomes annoying. After 60 seconds, the audio is restored.

A new "Monitor" (Mon) mode has been added. When selected, the audio from the Com receiver that is not selected for transmit will automatically mute when the selected primary radio audio becomes active. In this way, the Pilot may listen to AWOS on Com 2, but prevents the AWOS audio from interfering with the primary Com audio which is typically ATC.

The PMA5000EX is a direct replacement for the GMA240.*

*GARMIN and GMA240 are trademarks of Garmin International, Inc. PS Engineering, Inc. is not associated or affiliated with Garmin International, Inc. in any way.

WARRANTY

1-year Pro-Support exchange program, when installed by an authorized PS Engineering Dealer. After the warranty expires, a fixed repair fee will cover any repair. See Warranty Information in Installation manual.

ORDERING INFORMATION — PART NO.

PMA5000EX - Audio Selector Panel with 4-Place Intercom 050-550-0200

CHECKLIST OF FEATURES:

- IntelliVox® automatic VOX system with selectable "Extreme Noise Capability"
- Cellular telephone input with "DuTel" distribution
- Monitor Mode allows automatic muting of non-primary radio
- Front panel utility jack for phone, iPod, or for unswitched audio warnings
- Split mode for dual audio panel capability
- Two Differential, hi-fi stereo music source inputs reduce electrical noise
- Three Isolation modes - Pilot Isolate, All, and Crew
- Four music mute modes: Mute On/Off, Radio Mute, Intercom Mute
- Five unswitched inputs, with front panel unswitched input
- Dedicated front panel music volume control
- Selectable music distribution for passengers
- Two Front panel switched inputs (Aux 1 and 2) with selectable 60 second auto-mute mode

TECHNICAL SPECIFICATIONS

Approval Basis	None
Certification Documents	The PMA5000EX is intended for Experimental Aircraft ONLY
Intercom	4-place Stereo
Transceivers	4 - Com 1, Com 2, TEL, Com 1/2
Receiver Inputs	6 - Nav 1, Nav 2, ADF, AUX 1, AUX 2, AUX 3
Marker Beacon	None
Unswitched inputs	4
Power Required	11-33 VDC, 2.5 A
Power consumption	Speaker on, 600mA typical. 1A peak Speaker off, 350 mA
Output power	
Headphone:	50 mW into 150Ω w/o clipping 38 mW into 150Ω, <1% distortion
Audio Frequency Response	±3dB, 300Hz-6,000Hz
Entertainment Frequency Response	±3dB, 20Hz-18,000 Hz
Weight	2.0 lbs.
Dimensions	6.25" W x 1.3" H x 7.15" deep behind instrument panel
Environmental Conditions	None
Temperature Range	-15 C to +55 , with brief operation at +70 C
Altitude	50,000 feet, unpressurized

INTERCOMS

PM500EX
PM1200
PM1000II
PM3000

Digital Recorder

An optional internal digital recorder records up to one minute of aircraft radio. Pressing the playback button replays the last message. A great way to confirm radio receptions.

All intercoms have a one year ProSupport warranty, when installed by an authorized PS Engineering dealer. Upon dealer request, an exchange unit will be shipped overnight at factory expense. A fixed repair fee applies after the warranty period. See Installation Manual for more details on our limited warranty.

Intercoms

When selecting an intercom, remember the ol' adage "you get what you pay for." The intercom is an integral part of your communication package, and cutting cost simply doesn't make sense. Consider that the installation costs are practically the same regardless of what intercom you select. While a stereo intercom may take just a bit longer than a mono intercom to install, most of the cost of your intercom system will be in installation labor.

FAA certification is also more of an issue than it has ever been before. Be sure to check the requirements of FAA approval for your particular installation.

Experimental

PM500EX – Entry level intercom for low noise environments. Single volume and squelch system.

PM1200 – Specialty intercom intended for use in open cockpit aircraft and extremely loud aircraft. Incorporates "AMP" and "IntelliVox®" circuits.

Certified

PM1000II – Most popular of our intercoms because of the individual volume and squelch controls, as well as moderate price.

PM3000 – Hi-fi stereo intercom provides "karaoke mode" as well as four or six place capability.

PS Engineering can build a custom wire harnesses. See website for details.

PM500EX

For Experimental Aircraft Only

TECHNICAL SPECIFICATIONS	
Approval Basis	None
Input power	12 - 28 Volts DC at < 70mA
Headphone Impedance	150-1000Ω Typical
Audio Distortion	<10% 75mW into 150Ω load
Total available output power	40mW
Aircraft Radio Impedance	1000Ω Typical
3 dB Mic Frequency Response	350 Hz-6000 Hz
3 dB Music Frequency Response	200 Hz-15 Khz
Net weight	8.5 ounces
Dimensions	0.90" H x 2.60" W x 4.85" D

The PM500EX is a 4-place, panel mount unit designed as a basic intercom. It is intended for low noise environments and non-certified aircraft. It has both ISO and ALL intercom modes.

The volume control adjusts intercom volume and acts as the power switch. The single VOX (squelch) control adjusts the trip level for all microphones. When anyone speaks, the mic circuit opens. After a short delay, the circuit closes again, allowing the headset noise cancellation to be effective.

An entertainment input provides the Pilot and passengers the option to listen to music during flight. When the intercom is active, the music will mute allowing uninterrupted communications. Note: music not muted during radio reception.

PM500EX is not FAA certified - use for non-certificated aircraft only.

ORDERING INFORMATION	PART NO.
PM500EX Panel Mount (non-TSO)	11801
Four Channel Panel Mount Intercom	
Jack Kit	11910
Does not include Jack Kit	

PM1200

The PM1200 is designed for the noisiest of aircraft, including open cockpit and warbird aircraft. The Active Microphone Processor (AMP) uses emphasis and de-emphasis to strip much of the background noise out of the intercom audio.

The PM1200 provides both our IntelliVox® auto-squelch and Push-to-talk intercom (PTT-ICS) so that when the cockpit noise is too high for VOX operation, a press of the Copilot's volume control places the PM1200 into PTT-ICS mode.

And for those pilots who like to wear ear plugs while wearing headsets, the PM1200 has the ability, when connected to a 24 volt system, of providing up to 120mW! Now that's a lot of audio punch!

TECHNICAL SPECIFICATIONS	
Approval Basis	None
Input Power	13.8 - 27.5 Volts DC, < 250 mA
Output Power	120 mW into 150 @ 27.5 VDC 70 mW @ 13.75 VDC
Headphone Impedance	150-1000Ω (typical)
3 dB Music Freq. Response	200 Hz to 15 kHz
Unit weight	12 Ounces (0.342 kg)
Dimensions	1.25" H x 3.00" W x 5.80" D
Temperature	-20°C to +55°C

ORDERING INFORMATION	PART NO.
PM1200 2-place high performance intercom	11960
With AMP™ and IntelliVox®, specifically designed for high noise environment. Includes jack kit.	
PM1200 for blind mounting	11961
Designed for remote mount, to keep classic panels looking original. Includes jack kit.	

PM1000II

The PM1000II is a 4-place panel mounted intercom with VOX. Individual volume and squelch controls for the crew reduces the number of microphones that are on at any one time, reducing the din of the cockpit.

The standard PM1000II (11922) provides Pilot Isolate and All modes. The PM1000II with Crew (11920) has the additional capability of separating the passengers from the crew.

This design makes it easy to balance intercom, radio and music volume levels. And with Soft Mute©, the Pilot will never miss a radio call because the monaural music is automatically muted.

TECHNICAL SPECIFICATIONS	
FAA TSO	TSO C50c
Input power	13.8 - 27.5 Volts DC, <250 mA
Headphone Impedance	150-1000Ω typical
Audio Output	75 mW into 150Ω load <10% THD
±3 dB Mic Freq. Response	350 Hz - 6000 Hz
±3 dB Music Freq. Response	200 Hz to 15 kHz
Unit weight	12 Ounces (0.342 kg)
Dimensions	1.25" H x 2.60" W x 5.50" D

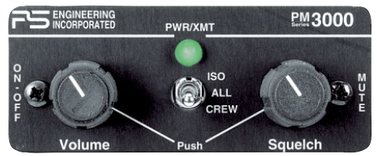
ORDERING INFORMATION	PART NO.
PM1000II 4-Place Intercom, FAA-TSO	11922
Panel intercom with ISO and ALL, music input. Installation hardware included.	
Same as above with 1-minute digital recorder (non-TSO)	11906
6-Place Expansion Unit	11616
PM1000II 4-Place Intercom with Crew, FAA-TSO	11920
Panel intercom with ISO, CREW and ALL, dual music input. Installation hardware included.	
Same as above with 1-minute digital recorder (non-TSO)	11908

PM3000

The PM3000 has its roots in the first available stereo intercom, the PM2000. With audiophile stereo music sound, this panel mount provides high-quality intercom and aircraft radio audio, while Soft Mute© provides the Pilot the ability to select having the muting function turned on or off. This eliminates the need for constant changes in the stereo music when the aircraft radio becomes active.

The VOX in the PM3000 earned the reputation "Set it-Forget it, it's the most forgettable intercom you'll ever use." The single VOX control sets the trip level for the Pilot, Copilot, and passengers microphones, reducing the number of microphones that are on at any one time.

The PM3000A (11932) has 2-unswitched audio inputs while the PM3000 (11931) provides the additional function of Crew mode. In this setting, the passengers are on one intercom while the crew on another.



TECHNICAL SPECIFICATIONS	
Approval Basis	TSO C50c
Input power	12-28 VDC, Current Drain: < 250 mA
Headphone Impedance	150-1000 Typical
Audio Distortion	<10%THD @150 mW into 150
Aircraft Radio Impedance	510Ω
+3 dB Microphone Freq. Response	300 Hz - 6000 Hz
+3 dB Music Freq. Response	200 Hz - 15Khz
Weight	12 Oz.
Dimensions	1.25" H X 3.00" W X 5.50" D
FAA-TSO C50c	RTCA/DO-214, DO160C

ORDERING INFORMATION	PART NO.
PM3000 4-Place Stereo Intercom, FAA-TSO	P/N 11931A
Intercom with ISO and ALL, differential music input, two unswitched inputs. Installation hardware included.	
Same as above with 1-minute digital recorder (non-TSO)	P/N 11933
PM3000 6-Place Stereo Intercom with Crew, FAA-TSO	P/N 11932
Intercom with ISO, CREW and ALL modes, dual music input. Installation hardware included.	
Same as above with 1-minute digital recorder (non-TSO)	P/N 11934